

PATENT
Atty. Dkt. No.: IP-0018-US (SPLG 0018US)

Remarks

Claims 1-57 remain pending in the present application, from which claims 18, 33, 35, 36, 39, 43, 44 and 52-57 have been withdrawn. Claims 54-57 were restricted and claims 18, 33, 35, 36, 39, 43, 44, 52 and 53 were subject to an election of species requirement. Applicants expressly reserve their right to have claims 18, 33, 35, 36, 39, 43, 44, 52 and 53 rejoined upon allowance of the generic claims. Applicants further expressly reserve their right to pursue the subject matter of claims 18, 33, 35, 36, 39, 43, 44 and 52-57 in a separate continuation, divisional or pending application.

The above claim amendments are believed to overcome the objections to the claims due to informalities.

The above claim amendments are also believed to overcome the indefiniteness rejection under 35 U.S.C. section 112, second paragraph. However, the undersigned strenuously traverses the position taken in the outstanding Office Action that claims 3, 8-15, 17, 19-25, 30-32, 34, 37 and 49 cannot be examined on the merits without speculating as to the scope. The indefiniteness issues raised in the Office Action are very minor and the scope of the claims was easily understood. The clarity of the original claims is self-evident. The indefiniteness issue is easily correctable in two simple ways, namely either by substituting the word "a" for "the", or as noted above. It is submitted that the choice not to examine such claims is without any legitimate basis and thus the outstanding Office Action is improper for failure to act on all of the pending non-withdrawn claims. Therefore, the Office Action is defective and a new NON-FINAL Office Action should be mailed in response to this amendment that properly examines all of the pending, non-withdrawn claims on the merits.

Applicants traverse the double patenting rejection of claims 1-17, 19-32, 34, 37, 38, 40-42 and 45-51. It is submitted that the noted claims of the copending applications (11/063,665 and 11/226,892) do not claim the same invention as the above claims. For example, the claims of the co-pending applications fail to recite, among other things, the limitations of claims 1 and 47, discussed below in connection with the rejections based on Kaufman and Lee.

PATENT

Atty. Dkt. No.: IP-0018-US (SPLG 0018US)

Applicants traverse the rejections of claims 1, 2, 4, 6, 7, 16, 26-29, 40, 47, 48, 50 and 51 under 35 USC 103 based on Kaufman (USP 6,383,754) in view of Lee (USP 4,053,433). Claim 1 recites a method for aligning microbeads that comprises, among other things, providing microbeads where each microbead has an elongated body with a code embedded therein, the code being oriented to extend along a longitudinal axis of the corresponding microbead. The method further comprises aligning the microbeads with the positioning device so the codes and longitudinal axis of the microbeads are in a fixed orientation relative to the code reading or other detection device. The cited art fails to teach or suggest any such method.

Claim 47 recites an apparatus for aligning microbeads to be read by a code reading device. The apparatus comprises a positioning device for aligning microbeads, each microbead having an elongated body with a code embedded therein, the code being oriented to extend along a longitudinal axis of the corresponding microbead, so the codes and the longitudinal axis of the microbeads are positioned in a fixed orientation relative to the code reading device.

Kaufman concerns binary encoded sequence tags, while Lee concerns a method of tagging with color coded microparticles. Both Kaufman and Lee describe the use of color codes. Yet, neither Kaufman, nor Lee, describe microbeads that have codes that are oriented to extend along any particular axis of the microbead, whether it be the longitudinal axis or otherwise. Specifically, Kaufman describes a flow analyzer that can distinguish color encoded microbeads and measure fluorescence simultaneously (column 48, column 34-38). Lee describes the use of color sequences, on microparticles, that are then visually inspected by a user of a microscope (column 2, lines 14-17). There is no discussion in either of Lee or Kaufman of aligning the color codes relative to an axis of a microbead. Nor is there any discussion in Lee or Kaufman of any reason or need to align the color codes in any particular manner on the microbead. Thus, even if combined, Kaufman and Lee fail to teach or render obvious the claimed method and apparatus that utilize microbeads having the claimed structure and code orientation.

Moreover, there is no reason within the cited art to modify Kaufman to provide a microbead with an elongated structure. Lee and Kaufman generally discuss using color codes on microbeads, without regard for any particular concern for the relation between

PATENT

Atty. Dkt. No.: IP-0018-US (SPLG 0018US)

the structure of the microbeads and the color codes . There is no reason, provided within the cited art, whether in Kaufman, Lee or otherwise, that would motivate the person of ordinary skill to modify Kaufman's microbeads to have the claimed elongated structure. The non-elongated microbeads of the cited art do not purport to suffer from a problem, that the cited art suggests to overcome by using elongated microbeads.

With respect to claims 1 and 47, the aligning operation and structure is facilitated by providing microbeads, on which the codes are orient along the longitudinal axis of the microbeads. Thus, claims 1 and 47 are not rendered obvious by the cited art.

Further, Applicants traverse the rejections of claims 5, 38, 41, 42, 45, and 46 based upon various tertiary references, added to the combined teachings of Kaufman and Lee. Regarding claim 5, there is no legitimate motivation provided within the Office Action for substituting the holographic code of Spencer for Kaufman's color code. Kaufman describes a detailed implementation for a binary encoded sequence tag that uses color codes to distinguish probes from one another. There is no suggestion in the cited art that Kaufman's original unmodified system would suffer any problem that Spencer teaches to overcome. Kaufman's and Spencer's codes are not simply interchangeable alternatives. Modifying Kaufman's probes would require an entirely different code reader. There is no suggestion that Spencer's reader would in fact work with Kaufman's probe. Thus, claim 5 is non-obvious.

Regarding claim 38, the Office Action maintains that it would have been obvious to use a circular microplate "IF" the circular arrangement conforms better with the detecting means. The reasoning offered in the Office Action is not a legitimate basis for an obviousness rejection. To establish a prima facie case of obviousness, the Office Action must set forth, among other things, a motivation that would lead the person of ordinary skill to modify the primary reference. The reasoning (i.e., "IF") to modify Kaufman + Lee offered in the Office Action is not a legitimate motivation. Kaufman describes a detecting system that operates with color codes. There is no suggestion that a circular arrangement would conform better to Kaufman's detector. Thus, claim 38 is non-obvious.

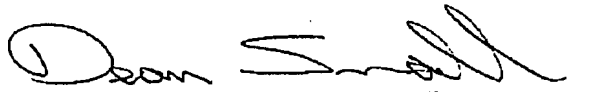
PATENT

Atty. Dkt. No.: IP-0018-US (SPLG 0018US)

The rejections of claims 41 and 42 are similarly deficient. The tertiary references fail to establish any reason to modify the system of Kaufman + Lee to include the claimed operations and structure. Thus, claims 41 and 42 are also non-obvious.

In view of the foregoing comments, it is respectfully submitted that the prior art fails to teach or suggest the claimed invention. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,

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